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A PROPHET LOOKING BACKWARDS: H.G. WELLS'S CURRICULUM FOR THE FUTURE

The Labour party must and does realize that a proper system of Education is the nearest thing to a panacea for all ills that could be devised, and also that their own future depends on a first-class and up-to-date method of education being placed within the reach of every child in the country. The present time is propitious because, not only is the existing form of education admittedly poor, but also because new and better systems have been tried and proved. (...)

What is wanted is a book of practical detail but also a vision for the future.

H.G. Wells, 1923 proposal for an unwritten textbook in pedagogy.¹

Few literary writers of the late nineteenth and early twentieth centuries were more closely or directly involved in the theory and practice of education than H.G. Wells. Wells grew up critical of the education he had received himself, and as a writer his attention turned from an examination of his own educational circumstances to those of the whole world. Wells became a provocative critic of, and innovator within, the existing educational system. 'I have always as a matter of conscience insulted schoolmasters,' he wrote to George Gissing in 1898, also claiming in 1903's *Mankind in the Making* that 'scolding the schoolmaster (...) is an amusement so entirely congenial to my temperament that I do not for one moment propose to abandon it.'² Wells had been a schoolmaster himself, training as a science teacher before making a living as a writer. His enormous subsequent output is dominated by a desire to instruct, from the didacticism of his social novels to the schemes for social reconstruction in his later utopian writings, to the epitaph he famously claimed for himself in 1941: 'I told you so. You *damned* fools'.

Wells had never seen his art as necessarily existing in a separate realm from the desire to instruct. In 1911, he gave a talk to the Times Book Club on 'The Scope of the Novel', subsequently rewritten for *An Englishman Looks at the World* (1914). In the address, Wells makes bold claims for the required participation of art, and of the novel in particular, in the coming necessary

¹*The Correspondence of H.G. Wells*, 4 vols (London: Pickering and Chatto, 1998), ed. by David C. Smith, III, p. 135.

²*George Gissing and H.G. Wells: Their Friendship and Correspondence*, ed. by Royal A. Gettmann (London: Hart-Davis, 1961), p. 94; *Mankind in the Making* (London: Chapman and Hall, 1903), p. 222.

reorganisation of the social and intellectual world. The novel as an art form is inherently, he argues, a 'powerful instrument of suggestion', and no established idea should be exempt from being addressed and criticised by it.³ Rather, novelists should engage more directly in writing about 'that complicated system of uneasy adjustments and readjustments which is modern civilisation'.⁴ Henry James reproved Wells for the loose 'inclusiveness' of this vision, and their famous falling-out resulted in part from Wells's rejection of James's requirement of a measured aesthetic distance from the wider world.⁵ Such a stance, for Wells, threatened to negate the value of Art altogether.

Wells saw himself as writing in the tradition of the public intellectual, sharing with his predecessors Adam Smith, Robert Owen, John Stuart Mill, John Ruskin, and Matthew Arnold a lively interest in education as social policy. To this end, along with his University biology teacher T.H. Huxley, Wells advocated compulsory scientific teaching in schools.⁶ An emerging theme in such nineteenth-century writing about education was that it might be made more exact a practice by the application of scientific methods.⁸ Theories of education might for Wells come to have the status of scientific truth.

A competing strand in Victorian rhetoric about education, however, especially later in the nineteenth century, was a sense of impending disaster. Economic anxiety had played a large part in initiating of the period's educational reforms. Britain was beginning to fear that her economic rivals were outstripping her in technological advancement, a development highlighted by the poor showing of British manufactures in the International Exhibition staged in Paris in 1867.¹⁰ Reforms such as the founding in 1853 of

³'The Contemporary Novel', *An Englishman Looks at the World* (London: Cassell, 1914), pp. 148-69 (p. 159).

⁴ 'The Contemporary Novel', p. 148.

⁵See *Henry James and H.G Wells: A Record of their Friendship, their Debate on the Art of Fiction and their Quarrel*, ed. by Leon Edel and Gordon N. Ray (London: Hart-Davis, 1958).

⁶On nineteenth-century education as a means of social control, see Anne Digby and Peter Searby, *Children, School and Society in Nineteenth-Century England* (London and Basingstoke: Macmillan, 1981), pp. 23-28.

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⁸See for instance, Alexander Bain, *Education as a Science* (London: Kegan Paul, 1879); John Lawson and Harold Silver, *A Social History of Education in England* (London: Methuen, 1973), p. 353.

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¹⁰Harold Silver, *Education as History: Interpreting Nineteenth- and Twentieth-Century Education* (London: Methuen, 1983), pp81-99; Brian Simon, 'Systematisation and Segmentation: The case of England', in *The Rise of the Modern Educational System:*

the Science and Art Department, or Forster's 1870 Education Act tended to be instituted not as progressive *per se*, but in order to prevent a perceived national crisis.¹¹ The Royal Commission on Scientific Instruction and the Advancement of Science of 1871-75, led by the Duke of Devonshire William Cavendish (whom Wells credited with 'unexpected breadth of sympathy') reported Britain's shortage of science teachers as 'a national misfortune'.¹² Wells inherited and amplified this strain of argument. A recurrent theme in his social vision is the competition between order and waste, at its most emphatic in Wells's diagnoses of national decay *Tono-Bungay* (1909) and *The New Machiavelli* (1911).¹³ As a utopianist, Wells had a natural tendency to think in terms of organisation, of order, of local competence. Like Oswald in Wells's 1918 educational novel *Joan and Peter*, Wells 'belonged to that minority of Englishmen who think systematically, whose ideas join on'.¹⁴ Education in particular has a duty to prevent waste in both demonstrating to and instilling in its recipients the virtues of system and organisation:

(Oswald's) intelligence told him that all the inefficiency, the confusion, the cheap and bad government by press and intrigue, were the necessary and inevitable consequences of a neglect of higher education for the past fifty years.¹⁵

In his rise from unpropitious lower middle-class beginnings, Wells had had to fight off successive apprenticeships that would have curtailed his own educational progress. After achieving international literary and political celebrity, Wells remained always aware of how easily his own considerable potential might have been wasted. With characteristic 'joined-on thinking', when reviewing his own development in 1934's *Experiment in Autobiography*,

Structural Change and Social Reproduction 1870-1920, ed. by Detlef K. Müller, Fritz Ringer and Brian Simon (Cambridge and Paris: Cambridge University Press and Editions de la Maison de Sciences de L'Homme, 1987), pp. 88-108 (p. 104). For the State's response, see Roy M. MacLeod, 'Education: Scientific and Technical', in *The 'Creed of Science' in Victorian England* (Aldershot: Ashgate, 2000), pp. 196-225.

¹¹See the findings of the 1861 Newcastle Report in Stuart Maclure, ed., *Educational Documents: England and Wales 1816-1960* (London: Chapman and Hall, 1965), pp. 77-78, Matthew Arnold's report on the Revised Code, pp. 81-82, Forster's speech on the 1870 Education Bill, pp. 99-105.

¹²Wells, *Correspondence*, I, p. 251; Maclure, pp. 107-08.

¹³See my own 'Pathological Consumption: Commodities and the End of Culture in H.G. Wells's *Tono-Bungay*', in Nickianne Moody and Julia Hallam, eds., *Consuming for Pleasure* (Liverpool: Liverpool John Moores University Press, 1999), pp.

¹⁴*Joan and Peter, The Works of H.G. Wells*, 24 vols, Atlantic edn. (London: Unwin, 1925), xxiv, p. 32. Unless otherwise noted, all references to works by H.G. Wells will be to the Atlantic Edition.

¹⁵*Joan and Peter, Works*, xxiv, p. 326.

Wells sees it in terms of broader social change. He correctly identifies the reforms that brought him a scientific education as the result of economic anxiety about other better-educated countries, particularly Germany. He also interprets the role of the new educational reforms of the late nineteenth century not as instituting a meritocratic ladder that would surmount social divisions, but as negotiating a compromise that would perpetuate them:¹⁶

The new order of things that was appearing in the world when I was born, was already arousing a consciousness of the need for universal elementary education. It was being realized by the ruling classes that a nation with a lower stratum of illiterates would compete at a disadvantage against the foreigner. A condition of things in which everyone would read and write and do sums, dawned on the startled imagination of mankind. The British and the National Schools, which had existed in order to make little Nonconformists and little Churchmen, were organized into a state system under the Elementary Education Act of 1871 and supplemented by Board Schools (designed to make little Unsectarian Christians.) (...) Few people realize the immense changes that the organization and mechanism of popular teaching have undergone in the last century.¹⁷

Wells's schooling began at a small private school, Morley's Commercial Academy, where he learnt mostly arithmetic and double-entry book-keeping. 'The Education Act of 1871 was not an Act for a common universal education, it was an Act to educate the lower classes for employment on lower-class lines' (I, p. 93). Morley was the only teacher, 'so the primary impression left upon my brain by that Academy are not impressions of competent elucidation and guidance, of a universe being made plain to me or of skills being acquired and elaborated, but of the moods of Mr. Thomas Morley and their consequences' (I, pp. 88-89). Wells gives his schoolmaster credit for ability in teaching mathematics, but accuses the language teaching of doing more harm than good: 'He crippled my French for life. He made me vowel-shy in every language' (I, p. 91). Throughout the first volume of the *Autobiography*, Wells emphasises the faults of the education that he received himself to outline the elements a modern curriculum ought to contain:

¹⁶See Brian Simon, 'Education and Citizenship in England', in *The State and Educational Change: Essays in the History of Education and Pedagogy* (London: Lawrence and Wishart, 1994), pp. 75-83 (p. 76).

¹⁷*Experiment in Autobiography*, 2 vols (London: Gollancz: 1934), I, p. 84, p. 87. Compare Peter Searby, 'The Schooling of Kipps: The Education of Lower Middle-Class Boys in England', in *Educating the Victorian Middle Class*, ed. by Peter Searby (Leicester: History of Education Society, 1982), pp. 113-31.

science, languages, world history and the development of a spirit of imaginative, critical curiosity.¹⁸

At fourteen, Wells felt that he was being removed from his schooling far too early; later, he would argue that this age was too young for anyone to cease receiving organised learning (I, p. 132). Apprenticed to a draper, Wells rebelled against the restraints that were imposed by labour on the development of his imagination, reading books beneath his desk, and, he claims, completing algebra exercises in his spare time. Wells was found insufficiently refined to pursue the career of a draper, and after a proposal for him to become a pupil-teacher at a school run by a relative fell through, Wells was again apprenticed, to a chemist in Midhurst. As part of his training, Wells was required to learn Latin, and was tutored by the headmaster of Midhurst Grammar School, Horace Byatt. It was Byatt to whom Wells wrote for help before running away from his third and final apprenticeship (with another draper), insisting to his mother that he should return to school. Wells, as D.H. Lawrence later would, became a pupil-teacher, taking examinations to improve his own and the school's standing: by performing well, he would earn extra grants for the school. His results were so good, however, that he won a scholarship to the Normal School of Science in Kensington.

This was Wells's first direct encounter with a science more practical than that learnt at the remove of cramming and textbooks, and he credits this experience with instilling in him the habit of thinking in systems, and connections:

Here were microscopes, dissections, models, diagrams close to the objects they elucidated, specimens, museums, ready answers to questions, explanations, discussions (...) an extraordinary mental enlargement as my mind passed from the printed sciences within book covers to these intimate real things and then radiated outward to a realization that the synthesis of the sciences composed a vital interpretation of the world. (I, pp. 199-200).¹⁹

The excitement of studying biology under Huxley in his first year subsided, however, when he became bored by the dull rigours of studying physics and geology, choosing to develop his imagination by reading Carlyle and Blake in the library. (He had objected in particular to the waste of time in

¹⁸'Schooling', *Mankind in the Making*, pp. 198-237.

¹⁹For Wells's ideas at the time as to how science should be taught, see *Correspondence*, I, p. 161, pp. 169-74, pp. 180-81, pp. 251-53, Preface to *A Textbook of Biology*, rev edn., 2 vols (London: University Correspondence College Press, [1894]), I, pp. vii-x.

to being required to make his own apparatus; later, as a science teacher, Wells would circumvent the risks to the dignity of the teacher that practical demonstration threatened by drawing the results of experiments in coloured chalks on the black board instead.) In the *Autobiography*, Wells is severe on the truculence of his younger self, but equally critical of the impractical and primitive teaching methods used to instruct him. He finds it:

more and more remarkable that the old Normal School and Royal School of Mines, the present Imperial College of Science and Technology, although an important part of its work still consists in preparing teachers of science, had never had, had not now and never seems likely to have, any chair, lecturer or course in educational science and method. Much less is there any study of social, economic and political science, any enquiry as to objectives, or any attempt to point, control and co-ordinate the teaching in the various departments. (...) The Imperial College, I realize in the retrospect, was and still is in fact not a college but a sprawl of laboratories and class rooms. Whatever ideas of purpose wrestled together in its beginnings are now forgotten. It has no firm idea of what it is and what it is supposed to do. That is to say it has no philosophy. It has no philosophical organization, no social idea, no rationalized goal, to hold it together I do not see how we can hope to arrest and control the disastrous sprawling of the world's affairs, until we have first pulled the philosophical and educational sprawl together. (I, pp. 231-32)²⁰

By the time he left the Normal School, Wells's interests had become not only scientific but socialist and literary; a scientific education was no longer sufficient alone to occupy his reawakened and curious speculative intelligence. Wells's ideal of 'a liberal education' was to involve the application of the truth-seeking habits he had learnt from science to the world outside the laboratory.

After graduating in 1887, Wells worked as a teacher, an experience reworked in the 1900 novel *Love and Mr Lewisham*. As he is of all of the educational institutions through which he passed, Wells is critical of the curriculum at Henley House. His censure of this school's teaching again provides an insight into what Wells believed the chief end of education to be:

We were teaching some "subjects," as the times went, fairly well, we were getting more than average results in outside examinations. But collectively, comprehensively we were teaching nothing at all.

²⁰The first University chair in Education had only been established in 1876 (at Edinburgh and St Andrews) as a result of a bequest, and such teacher-training as such that there was in the late nineteenth century tended to be exclusively for women: H.C. Barnard, *A History of English Education from 1760*, 2nd edn. (London: University of London Press, 1961), p. 190. In *Joan and Peter*, Mackinder, the headmaster of the preparatory school White Court, makes the same complaint: *Works*, XXIII, p. 385.

We were completely ignoring the primary function of the school in society, which is to correlate the intelligence, will and conscience of the individual to the social process. (...) We taught no history of human origins, nothing about the structure of civilization, nothing of social or political life. We did not make, we did not even attempt to make participating citizens. (I, p. 325)

An injury from a foul in a football match during an earlier teaching post in Wrexham resulted in a lengthy illness, curtailing Wells's career as a schoolteacher. He became a correspondence tutor, standardising and systematising exam preparation in biology by analysing past papers. During this period, Wells's first books were written, *Honours Physiography*, (with the biologist Richard Gregory), and *A Textbook of Biology* (both 1893). He was also co-founder and editor of the *Science Schools Journal*, and a reviewer for the *Educational Times*, in the course of which 'educational theory was forced upon me' (*Autobiography*, I, p. 350). In time, however, Wells earned more from journalism than he could from tutoring, thus beginning his career as an imaginative writer and self-appointed teacher to the world. Insisting on 'the imperative necessity of scientific method in public affairs', Wells went on to outline a series of utopias in which education would play a crucial part.²¹

Wells's most frequent educational cause in this period is the popularising of scientific ideas, the subject of much of his early journalism.²² The corresponding target in his polemic was the teaching of Latin and Greek. Wells had found the learning of Latin stimulating for its systematic and regular properties, but favoured a creative synthesis of sciences and humanities rather than an training in one exclusive of the other. He argued that to encourage cleverer students to favour classics, and the less able to specialise in science, as was often the case, was hopelessly backward-looking, and even potentially threatened disaster.²³ Wells's writing frequently portrayed apocalypse as the only possible future alternative to his planned utopia, and sometimes even welcomed catastrophe as providing opportunity for wholesale reconstruction from fundamentals upwards, as in 1908's *The War in the Air* and 1913's *The World Set Free*. 'Human history becomes more and more a race between education and catastrophe,' he famously wrote in

²¹*What is Coming: A Forecast of Things After the War* (London: Cassell, 1916), p. 101.

²²See H.G. Wells, *Early Writings in Science and Science Fiction*, ed. by Robert M. Philmus and David Y. Hughes (Berkeley: University of California Press, 1975).

²³*Mankind in the Making*, pp. 201-10. For Wells's view of the correct relationship between science and the classics, see his 'The Case against the Classical Languages' in Sir Ray Lankester, ed., *Natural Science and the Classical System in Education* (London: Heinemann, 1918), pp. 183-95, and the report on the eleventh annual meeting of the British Science Guild in *Nature*, 99 (1917), 186-87.

1920's *The Outline of History*.²⁴ Education should provide a necessary outlet for youthful imagination and creativity, making sure that no potential for individual development is wasted, while fashioning pupils into responsible future citizens who will co-operate in the future commonwealth, or World State, described in detail as early as 1905's *A Modern Utopia*. 'Men's loyalties, the sides they take in political things, are not innate, they are educational results,' Wells wrote in the *Outline*.²⁵ Perhaps surprisingly, this utopian but, Wells believed, fully possible, international polity will be created at first not by Science, but by the correct teaching of History, a history that will instruct pupils with the need for the creation of a World State.

This need became, for Wells, more urgent with the threat and subsequent outbreak of the Great War. *The World Set Free* foresees not only a clash between European powers resulting from Balkan struggles for self-determination, but also an atomic war later in the century. In this version of future history, national populations and world leaders alike are inspired by the idealist King Egbert to renounce their nationhood in order to put an end to war. In real life, Wells believed, such a political transformation could not take place unless the world's populations were made to question the concept of nations, and that this could only be achieved by teaching a form of history that would emphasise the community between nations, and the common origin of mankind, rather than only the history of one's own country.²⁶

Recent developments in Germany provided a negative analogue for such a project. A state established as recently as 1871, Germany's new rulers had needed to create a new national identity to bind its previously separate states together, and had reorganised its educational system accordingly.²⁷ Wells deplored the ends to which German *Kultur* had been directed, writing in 1916, 'Their minds have been systematically corrupted by base historical teaching, and the inculcation of a rancid patriotism. They are a people under the sway of organised suggestion.'²⁸ He was impressed, however, by the effectiveness of a Herbartian exercise that could, in the space of a single generation, rewrite the received ideas of a whole country for an ideological purpose. As with the superiority of Germany's technical advancement, the

²⁴*The Outline of History, Being a Plain History of Life and Mankind* (London: Newnes, 1920), 2 vols, II, p. 758.

²⁵*Ibid.*, p. 557.

²⁶*Compare Autobiography*, I, p. 99.

²⁷See Detlef K. Müller, 'The Process of Systematisation: The Case of German Secondary Education', in Müller *et al.*, eds., pp. 15-52.

²⁸*What is Coming*, p. 272; see also p. 229, *Outline*, p. 693.

efficiency of the her *Gymnasien* highlighted the chaotic nature of how the process was carried out elsewhere:

Germany was different; Germany was teaching and teaching in schools, colleges, press, everywhere, this new Imperialism of hers, a sort of patriotic melodrama, with Britain as Carthage and Berlin instead of Rome. They pointed the whole population to that end. They *taught* this war. All over the world a thousand other educational systems pointed in a thousand other directions.²⁹

The First World War proved that education misapplied could indeed lead to catastrophe: 'all this vast disaster to the world was no more and no less than an educational failure' (*Joan and Peter*, XXIV, p. 243). The content and method of future education must occupy a vital part in the period of reconstruction following the War:

This and no other is the hour for educational reconstruction. And it is in the decisions and readjustments of schools and lectures and courses, far more than anywhere else, that the real future of Great Britain will be decided.³⁰

Wells's post-Great War novel *The Undying Fire* (1919) is 'Dedicated to All Schoolmasters and Schoolmistresses and every Teacher in the World', and sets out the author's intended educational program in only barely fictionalised form. The book is intended as a present-day rewriting of the Book of Job from Wells's own peculiar theological standpoint.³¹ Its central character, Job Huss, is headmaster of a progressive school, whose faith is tested when, after a wager between God and Satan, he loses his son in the war, his savings in a financial disaster, four pupils and a schoolmaster in a series of accidents, and his position at the school. Job's marriage consequently suffers, and, while staying at a seaside resort, he discovers he has cancer. The novel is written mostly in dialogue on matters curricular and theological between the headmaster and the school governors and colleagues who visit him. On principles of which the author evidently approves, Job has modernised the school's teaching of science, added Spanish and Russian to its language options, and vigorously promoted the teaching of history.³² As

²⁹*Joan and Peter*, Works, XXIV, p. 258.

³⁰*What is Coming*, p. 152.

³¹During the 1910s, Wells flirted with a kind of deist religious belief, dramatised in novels such as *Mr Britling Sees It Through* (1916) and *The Soul of a Bishop*, and the non-fictional *God the Invisible King* (1917). These views were explicitly repudiated later in the semi-autobiographical *The World of William Clissold* (1926) and Wells's later autobiography.

³²See *Mankind in the Making*, pp. 208-09 on Wells's view of the poor quality of language-teaching in 1903, and *What is Coming*, pp. 124-25.

Wells argued that ideology and politics cannot, and must not be excluded from art, so Job argues that education is also of necessity polemical. His doctor sides with Job:

"It's one of the things I can never understand about schoolmasters and politicians and suchlike, the way they seem to take it for granted you can educate and not bring in religion and socialism and all your beliefs. What is education? Teaching young people to talk and read and write and calculate in order that they may be told how they stand in the world and what we think we and the world are generally up to, and the part we expect them to play in the game. Well, how can we do that and at the same time leave it all out? What is the game? That is what every youngster wants to know. Answering him, is education."³³

History is promoted even over science in this ideal curriculum, since, Job argues, ignorance of history results in the poor social organisation which prevents the effective application of science.

They solve the problems of material science in vain until they have solved their social and political problems. (...) It is no occult secret; it is a plain and demonstrable thing to-day that the world could give ample food and ample leisure to every human being, if only by a world-wide teaching the spirit of unity could be made to prevail over the impulse to dissension.³⁴

The teaching of the origins of Man is crucial as the starting-point of this collective history. Just as the wider teaching of a greater number of languages will further mutual understanding, so knowledge of mankind's shared origin will deconstruct the myths of English or German racial supremacy.³⁵ In *The Undying Fire*, the foundation of the World State is loosely identified with God's purpose for Man, and thus a Wellsian education becomes a kind of sacred duty. Job's faith in God (or Wells) is finally rewarded. A distant relative dies, leaving him a fortune; the tumour proves to be benign; ex-pupils rally round to protect Huss's job and reforms, and a telegram brings the news that his son is not dead, but a prisoner of war.

Wells's conclusions were not always so resolute, however, reflecting his anxiety that although the right sort of educational ideas now exist, they may never be put into practice. The 1924 Preface to *Joan and Peter*, a novel

³³ *The Undying Fire, Works*, XI, pp. 108-09.

³⁴ *The Undying Fire, Works*, XI, p. 140.

³⁵ Wells ruefully noted that even while he was teaching in the final decade of the nineteenth century, evolution was still too controversial a topic to be included on the syllabus; Man does not even enter the *Outline of History* until page 39; compare *The Undying Fire*, XI, pp. 112-13, *Outline*, I, p. 86.

published a year before *The Undying Fire*, claims this novel was 'designed to review the possibilities of a liberal education in contemporary England' (XXIII, p. ix). *Joan and Peter* is less formally structured around a single issue than *The Undying Fire*. Like most of Wells's middle-period fiction, it is highly discursive and very loosely structured; like the War whose effects the novel dramatises, poor organisation renders it unnecessarily long. *Joan and Peter*'s larger scope, however, allows a much fuller dramatisation of the effects of the different kinds of education its eponymous hero and heroine receive, and its structure attempts to mirror the process of growing-up and being educated: the novel's penultimate chapter is entitled 'Joan and Peter Graduate'.

In early childhood, foster-siblings Joan and Peter Stubland are orphaned by a boating accident. Although their parents Arthur and Dolly had agreed on their uncle Oswald as a suitable guardian, Arthur, secretly jealous, alters his will to make Oswald only one of four joint guardians. The children's care thus passes first to two aunts Phyllis and Phoebe, New Women aesthetes, who become more parodically out-of-date as the novel progresses, and who force on the children the wrong kind of 'progressive' education. Their physician 'had the usual general practitioners' view that any education whatever is a terrible strain on the young, and he was quite on the side of Rousseau in that matter' (XXIII, p. 34). The narrator mocks the idea that children will develop naturally if left to their own devices; the haphazard and unsystematised nature of Wells's own education had convinced him of the dangers of too much freedom. (In 1931, Wells admitted to a 'pretty hard dislike' of A.S. Neill, the founder of Summerhill, thinking his method 'only suited (like the Montessori system) for badly disorganized children & adolescents', since it disregards 'the natural anti-social instinct'.)³⁶ Wells's educationalism was anti-Rousseau: unsupervised development leads to chaos and, consequently, disorder and waste.

The headmistress of the undisciplined and artistic school to which their aunts send the children has a training that is well-intentioned but unsystematic:

She had already done the Theory and Practice of Education part of the diploma. For that she had read parts of "Leonard and Gertrude" and she had attended five lectures on Froebel. These were days

³⁶*Correspondence*, III, p. 405. Compare an entirely opposite utopian view of education in William Morris, *News from Nowhere: Or An Epoch of Rest: Being Some Chapters from a Utopian Romance by William Morris*, ed. by Krishan Kumar (Cambridge: Cambridge University Press, 1995), pp. 31-34, pp. 66-67, in which spontaneous development as teaching supplants schooling altogether, and history barely read at all.

long before the Montessori system which is now so popular with our Miss Millses; the prevalent educational vogues of the nineties were kindergarten and Swedish drill. (XXIII, pp. 160-61)

The School of St. George and the Venerable Bede is not all bad, but modish and disorganised, so fails to reward the curiosity of its pupils. Wells's young protagonists are constantly eager for the stimulation of the new, whether supplied by play or by systematised instruction. Children grow 'as children do grow under favourable circumstances, after the manner of Nature in her better moods, that is to say that is to say after the manner of Nature ploughed and weeded and given light and air' (XXIII, p. 156). The metaphor of agriculture is a fertile one for Wells here, and perhaps an intended correction of Froebel's image of the *kindergarten*. The process of education may be one of natural growth, but a growth that requires careful cultivation; schooling must be practical, with a definite end in view, like farming, not aesthetic, like gardening.³⁷ Uncultivated, the mind might easily fall into harmful habits, such as the belief of the children's maths mistress that seven sevens might sometimes equal fifty-six.

Aunt Phoebe is content for Peter to play 'like a happy little animal' (XXIII, p. 106); this is exactly what Wells's biological imagination fears if he is left to develop naturally.³⁸ Job warns in *The Undying Fire*: that 'an untaught man is but himself alone, as lonely in his ends and destiny as any beast; a man instructed is a man enlarged from that narrow prison of self' (XI, p. 47). Oswald agrees:

Religion, loyalty, patriotism, those strange and wonderfully interwoven nets of superstition, fear, flattery, high reason and love, have subjugated this struggling egotistical ape into larger and larger masses of co-operation, achieved enormous temporary securities. But the ape is still there, struggling subtly. (XXIV, p. 34)

For Oswald as for Wells, 'Education is socialisation. Education is the process of making the unsocial individual a citizen' (XXIII, p. 361).³⁹

As the example of Germany shows, education can be self-conscious about its duty to instil values, yet still teach the wrong values: religious education may do similar harm. While Wells was not at this stage anti-religious, he felt strongly that religion should not be allowed a monopoly on what is taught by education. (He cites within this novel the seminary in

³⁷Barnard, p. 173. Compare *The Story of a Great Schoolmaster, Works*, XXIV, p. 359.

³⁸For Wells's anxiety over Man as an animal, see Peter Kemp, *H.G. Wells and the Culminating Ape: Biological Themes and Imaginative Obsessions* (London: Macmillan, 1982).

³⁹Compare *The World Set Free, Works*, XXI, p. 208).

Portrait of the Artist as a Young Man as an example of the worst kind of education subordinated to religion). The children's other aunt, the tyrannical Lady Charlotte Sydenham, typifies the misapplication of politics and religion to the question of education (see XXIII, pp. 274-75). As appalled by the secularism of Joan and Peter's upbringing, as she is by the centralising tendency of 'Mr Balfour's Education Act' (which attempted to bring more schools into municipal control), Lady Charlotte has the children kidnapped and privately educated according to her own misguided beliefs. Lady Charlotte is the first of the children's guardians to discriminate against Joan for her illegitimacy (she is in fact the love-child of Dolly's brother), and Joan is farmed out to the careless servant Mrs Pybus, under whose care she falls dangerously ill. Peter is sent to a private school very like Mr Creakle's Academy in *David Copperfield*. High Cross Preparatory School is little better than a violent examination-factory, and after one punishment too many, Peter runs away, and both children pass into the care of their uncle, the well-intentioned Empire-builder Oswald.

Returning from Africa, Oswald learns of a witness who had seen Dolly trying to swim towards the shore after her husband had already drowned: her will thus takes priority and Oswald becomes the children's sole guardian. Oswald's agonies over the best education for his wards occupy the whole of the chapter 'A Searching of Schoolmasters' (which owes much to Wells's own attempts to find a suitable school for his own two sons, born in 1902 and 1903). Oswald, unlike the boy's previous guardians, asks Peter what he would like to learn:

"There's a lot you don't know yet." said Oswald.

"Can't I read it out of books?" asked Peter.

"You can't read everything out of books," said Oswald. "There's things you ought to see and handle. And things you can only learn by doing."

Oswald wanted Peter to plan his own school.

Peter considered. "I'd like lessons about the insides of animals and about the people in foreign countries – and how engines work – and all that sort of thing."

"Then we must find a school for you where they teach all that sort of thing," said Oswald, as though it was merely a question of ordering goods from the Civil Service Stores...

He had much to learn yet about education. (XXIII, pp. 341-42)

Oswald is frustrated by the lack of any centralised source of information on schools and, naturally, he fails to find one that reaches all his stringent requirements of teaching world history, economics and science. When Oswald does meet a headmaster who shares his own progressive views, he

learns that even mildly progressive public schools must be run on profitable lines and still appeal to more conservative parents, this also a symptom of the world's economic disorganisation.

Oswald is no more impressed by Oxford and Cambridge, even Ruskin College, which dispiritingly 'reminded him of *Jude the Obscure*' (XXIII, p. 370).⁴⁰ He concludes that 'the real work of higher education, the discussion of God, of the state and sex, of all the great issues in life' (XXIII, p. 373) is being evaded by the universities and carried out by politically-minded writers such as G.K. Chesterton, Hilaire Belloc, and Wells. Oswald objects especially to Wells for his commercial background; this is a self-conscious joke at the author's expense, but the genuine objection on the part of both author and character is that extra-curricular reading as the provider of true higher education is too unsystematic. In the kind of educational order that Wells envisions, there would ideally be no need for him to write such polemic. Oswald also comes to consider the unsatisfactory nature of women's education available for Joan, who goes to Newnham College, Cambridge. Ultimately, however, his investigations are rendered moot by the First World War, which enforces the continuation of Joan and Peter's education in a wholly different sphere. The novel ends with a 'valediction' on education delivered by Oswald to the by-now married Joan and Peter, but the world still unchanged and anxiously facing reconstruction after the devastation of the war.

After the speculative experiments in education within his fiction, in 1918 Wells seriously began trying to educate the world himself. A major obstacle to the kind of teaching he wished to promulgate was the lack of textbooks that shared his own political world-view.⁴¹ Though by his own admission not a specialist historian, Wells took it upon himself to write for the world the history its political future needed, cribbing from the *Encyclopaedia Britannica* and asking historians for expert advice.⁴² *Joan and Peter* had been deeply engaged with 'history' both as a subject taught in school and as the dialectical process being enacted in the real world.⁴³ Wells

⁴⁰Compare *What is Coming*, pp. 149-50.

⁴¹For the intended aims of the *Outline*, see the 1918 essay 'History is One', reprinted in *Works*, xvii, pp. 1-16.

⁴²A.B. McKillop argues in *The Spinster and the Prophet* (London: Aurum, 2001) that Wells plagiarized parts of the *Outline* from an unpublished manuscript by Florence Deeks. For a hostile account of Wells's omissions see William T. Ross, *H.G. Wells's World Reborn: The Outline of History and its Companions* (Selinsgrove: Susquehanna University Press; London: Associated University Presses, 2002).

⁴³Cf. 'History, for her, has ceased to be a fabric of picturesque incidents; it is the study of a tragic struggle that still goes on.' *The Secret Places of the Heart*, *Works*, xxv, p. 464.

clearly perceived the latter as the determined consequence of the former. The world's politics and social organisation were a causal product of the history its leaders had been taught at school: 'the Outline of History is going to change History,' Wells boasted to Rebecca West.⁴⁴ In his rejection of university curricula, Oswald had 'considered any history fragmentary that did not begin with the geological record and end with a clear tracing of every traceable consequence of the "period" in current affairs' (XXIII, p. 444). This is exactly the scope of the textbook Wells went on to write. 'The book will rouse anybody in the history textbook & history teaching line to blind fury,' he proclaimed in a letter. It is a serious raid into various departments of special knowledge (...). It is a necessary counter to nationalism & imperialism. There will be a sustained attempt to [represent?] me as an ignorant interloper & dispose of me in that way.'⁴⁵

The Outline of History was published in twenty-four monthly parts from November 1919 with footnotes by six collaborators, who also helped Wells re-draft the work in its numerous successive editions.⁴⁶ In 1927, he claimed that it had brought him over £60,000: David C. Smith has argued that the commercial success of the *Outline* and its spin-offs is the pivotal moment in Wells's campaign to educate the world, allowing him to be more experimental as a teacher and a prophet in his subsequent fiction.⁴⁷ The *Outline* made the Wellsian view of the world more prominent than even he could ever have hoped, selling two million copies in Britain and the US alone, and being widely adopted in schools. A version for the general reader, *A Short History of the World*, followed in 1922, and two companion volumes were written (although the process of collaboration on these was more problematic): *The Science of Life* (1930), with Wells's son Gyp and T.H. Huxley's son Julian, on biology and physical science, and *The Work, Wealth and Happiness of Mankind* (1931), covering economics and politics. All were republished and revised, the *Short History* especially enjoying an extensive afterlife: it reappeared in a schools version abridged by E.H. Carter in 1925, a revised version in 1946, and again in 1951, revised by Raymond Postgate and G.P. Wells. Penguin reissued the volume once more in 2005.

⁴⁴ H.G. Wells and Rebecca West, ed. Gordon N. Ray (London: Macmillan, 1974), p. 104.

⁴⁵ Unpublished letter quoted in McKillop, p. 144.

⁴⁶ David C. Smith, *H.G. Wells: Desperately Mortal* (New Haven and London: Yale University Press, 1986), pp. 250-51.

⁴⁷ *Correspondence*, III, p. 255; Smith, p. 249, *Correspondence*, I, p. xxxix. See Smith, pp. 249-59 for the enormous popular response to the *Outline*, including Hilaire Belloc's objections to the work's hostile account of Catholicism.

Wells's interest in education continued beyond the numerous revisions of the *Outline of History* and throughout his life: in 1937, for instance, a month before his seventy-first birthday Wells delivered a lengthy address to Section L of the British Advancement of Science on life education.⁴⁸ He became involved in the actual practice of education in his collaboration on the curriculum of Oundle School, where he sent his own sons.⁴⁹ Oundle's headmaster F.W. Sanderson was the acknowledged model for Westinghouse, (named Henderson in the first edition of the novel), the forward-thinking headmaster of Caxton School in *Joan and Peter*. Sanderson died suddenly in 1922 in front of Wells and an audience of the Union of Scientific Workers, shortly after delivering an address on 'The Duty and Service of Science in the New Era'. As a tribute, Wells began to compile an official volume *Sanderson of Oundle*, whose proceeds were devoted to the school, but Sanderson's widow objected to Wells's portrayal, so he wrote his own account instead.⁵⁰ *The Story of a Great Schoolmaster* was published in 1923 in *The New Leader* and *The New Republic* (which had also serialised *Joan and Peter*), in book form a year later, and included in volume 24 of the Atlantic edition, following the second part of *Joan and Peter*. The scale of the tribute Wells pays indicates the store he set by the kind of education undertaken at Oundle:

Of all the men I have met (...) only one has stirred me to a biographical effort. This one exception is F.W. Sanderson, for many years the headmaster of Oundle School. I think him beyond question the greatest man I have ever known with any degree of intimacy. (...) To tell his story is to reflect upon all the main educational ideas of the last half-century, and to revise our conception of the process and purpose of the modern community in relation to education.⁵¹

Sanderson and Wells influenced each others' ideas about education, especially in its relationship to scientific methodology. The curriculum Sanderson put into practice at Oundle and advocated elsewhere was

⁴⁸Correspondence, IV, pp. 164-66.

⁴⁹See the *Outline*, p. 664.

⁵⁰'Difficulties arose as the work advanced, and in the end Mr Wells left the task to the staff and published his own book. The composite volume, as was natural, erred on the side of hero-worship, whereas Mr Wells's showed, as some think, characteristic lapses from good taste. Somehow, between them, the real man has got overlaid and Sanderson is on his way to becoming a legendary figure.' William George Walker, *A History of the Oundle Schools* (London: The Grocers' Company, 1956), p. 570, also Smith, p. 261.

⁵¹ *The Story of a Great Schoolmaster, Works*, XXIV, p. 311.

progressive, forward-looking, co-operative and systematic.⁵² Sanderson instituted a number of the reforms Wells had argued for, reducing the amount of classical teaching, vigorously promoting the teaching of history, and building not only new science laboratories but also a foundry, as he felt that science in schools should be applied and technical as well as theoretical and experimental. He shared with Wells an ideal of the liberal education as fostering a productive synthesis between arts and sciences, permitting individual pupils to specialise in the areas which would best fulfil their individual potential.

Science is essentially creative and co-operative, its outlook is onwards towards change, it means searching for the truth, it demands research and experiment, and does not rest on authority. Under this new spirit all history, literature and art and even languages should be rewritten. (Sanderson's final lecture, reprinted in *Schoolmaster, Works*, XXIV, p. 424)

Unusually, Sanderson saw his charges as future leaders in the worlds of science, engineering and industry as well as the more traditional routes for public-school-educated boys. He encouraged them to work collaboratively on vocational projects that interested them outside of the classroom, seeing this as a microcosm of the collective effort necessary to improve the world in the future. For Sanderson, as for Wells, the purpose of education was as the 'propaganda of reconstruction' (XXIV, p. 382), aimed towards the creation of a better world; in Wells's account:

He saw the modern teacher in university and school plainly for what he has to be, the anticipator, the planner and the foundation-maker of the new and greater order of human life that arises now vividly amidst the decaying substructures of the old. (XXIV, p. 316)

Wells ruefully notes, however, that Sanderson's successor as headmaster is only barely aware of the spirit motivating his predecessor's reforms, and that much valuable work might be lost.⁵³ Until such projects can be made universal and collective, Wells's desired utopian future will never come into being.

⁵²F.W. Sanderson, 'The Teaching of Science' in A. Watson Bain, ed., *The Modern Teacher: Essays on Educational Aims and Methods* (London: Methuen, 1921), pp. 139-72; *Sanderson of Oundle* (London: Chatto, 1923).

⁵³Wells may have been unduly pessimistic about the consolidation of Sanderson's work undertaken by Dr Kenneth Fisher, who had been a science master at Eton and Clifton College, and the manager of a munitions factory. On Sanderson's legacy, see Walker, pp. 476-580 and Raymond Flower, *Oundle and the English Public School* (London: Stacey, 1989), pp. 89-108.

H.G. Wells, as in so many areas, anticipated his time in the theory and methods of education. Seeing that a well-organised educational system is inseparably a part of the ideological apparatus of the State, he seized this on education reform as an opportunity to found a better State.⁵⁴ Though Wells's planned future was essentially anti-democratic, envisioning the rulers of the future state as a meritocratic elite, this process was to be collaborative and consensual: 'education is the state explaining itself to and incorporating the will of the individual' (*Joan and Peter*, XXIV, p. 262). Wells was at his most emphatic about what should be taught to the most promising students, arguing that since the World State must have a ruling elite, it is imperative that the elite should be well-educated.

In her not wholly unfavourable review of *Joan and Peter* in *The Times Literary Supplement*, Virginia Woolf reproved Wells for blurring the boundaries between fiction and educational polemic: 'He throws off the trammels of fiction as lightly as he would throw off a coat in running a race.'⁵⁵ Wells might have riposted that he has to if the 'race' is not to be won by 'catastrophe' instead. 'Human history is one history and human welfare is one whole,' Wells had written in the same year as *Joan and Peter*. 'And a saner teaching of history means a better understanding of international problems, a saner national policy, and a happier world.'⁵⁶ The aims of education, science and literary production are also one for Wells: the construction of a better future. In his work from *The Time Machine* to 1945's *Mind at the End of Its Tether*, Wells repeatedly presented an artistic vision of the future;⁵⁷ the future, biologically, is literally embodied in children, who must be educated. Wells hoped that the correct forms of education, and the best possible teaching of History and Science in particular, would establish the foundations of a reformed government of the world in which poverty and war could be eradicated along with national boundaries.⁵⁸ 'There's really nothing more to

⁵⁴Louis Althusser, 'Ideology and the State', in *Lenin and Philosophy and Other Essays*, trans. by Ben Brewster (London: NLB, 1971), pp. 123-73 (127).

⁵⁵Unsigned review of *Joan and Peter* in *The Times Literary Supplement*, in *H.G. Wells: The Critical Heritage*, ed. by Patrick Parrinder (London: Routledge and Kegan Paul, 1972), pp. 244-47 (246).

⁵⁶'History is One', *Works*, XXVII, p. 12, p. 16.

⁵⁷See *The Discovery of the Future*, ed by Patrick Parrinder (London: PNL Press, 1989).

⁵⁸It is interesting to note that the *Outline* was published in the same year as the Newbolt Report, which, conversely, promoted the educational use of English language and literature to reinforce national self-identity. See Patrick Scott, 'English Studies and the Cultural Construction of Nationality: The Newbolt Report Reexamined', in *Culture and Education in Victorian England*, ed. by Patrick Scott and Pauline Fletcher (Lewisburg:

be done with our present public until its ideas about history are changed,' Wells wrote to Gilbert Murray, a collaborator on the *Outline*.⁵⁹ Nineteen years after its publication, Europe was again at war; The League of Nations, which Wells helped to found had failed. In spite of Wells's efforts, the world seemed determined to enact George Santayana's proverb that 'those who cannot remember the past are condemned to repeat it.'⁶⁰

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Bucknell University Press; London and Toronto: Associated University Presses, 1990), pp. 218-32.

⁵⁹Quoted in Norman and Jeanne Mackenzie, *The Time Traveller: The Life of H.G. Wells*, rev. edn. (London: Hogarth, 1987), p. 321.

⁶⁰George Santayana, *The Life of Reason: or, The Phases of Human Progress, Revised by the Author in Collaboration with David Cory* (London: Constable, 1954), p. 82.